THE FARMERS' CABINET,

DEVOTED TO AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.

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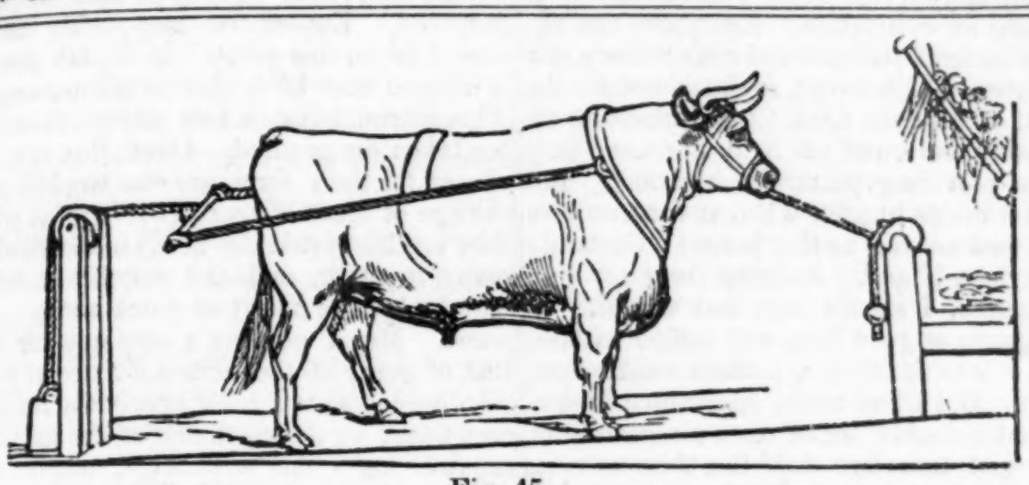


Fig. 45.

Oxen.

The author of a series of valuable Essays on Agricultural and Rural affairs, JOHN TAYLOR, Esq., published a few years since in N. Carolina, says, that next to the recommenation of the most approved modes of culture, the best and cheapest means of effecting it, deserve our attention, and lastly frugality in the consumption of our produce. The introduction of a more general use of oxen as substitutes for horses in the cultivation of the earth, and the other operations of husbandry, have high claims upon the attention of our farmers, as being attended with many advantages. But there is in this country a strong prejudice against this generous animal, which is the first thing to be got over—when that is removed, the credit of the ox will soon follow.

It is a fact, which cannot be disproved, that oxen in some sorts of work, are equal to horses; in these cases, they certainly ought to be preferred, because they are kept at considerably less expense, and less casualities attend them. Although oxen cannot well be used to the entire exclusion of horses, yet there is undoubtedly, a great deal of work that they would do as well, particularly in carting and all heavy work. In most instances they are nearly equal to horses, and in their support they are infinitely cheaper. Since fall and winter ploughing for the succeeding year's corn crop, are coming into general use, the value of oxen will be more highly appreciated; as at the cool season of the year they may be usefully employed at the plough in fallowing up the land, or engaged in hauling in the corn crop, while the horses are at this work. The late President MADISON, in one of his annual addresses before the Agricultural Society of Albermarle, has some new and valuable remarks on oxen, which claim the particular attention of every husbandman. He says:

"I cannot but consider it as an error in our husbandry, that oxen are too little used in the place of horses. Every fair comparison of the expense of the two animals, favors a preference of the ox. But the circumstance particularly recommending him, is, that he can be supported when at work, by grass and hay; while the horse requires grain and much of it; and the grain generally given him, Indian corn, the crop which requires most labor, and greatly exhausts the land. From the best estimate I have been enabled to form, more than one half of the corn crop is consumed by horses; including

the ungrown ones; and not less than one half by other than pleasure horses. By getting free from this consumption, one half the labor, and of the wear of the land, would be saved, or rather more than one half: for on most farms one half the corn crop grows on not more than two fifths, and sometimes a smaller proportion, of the cultivated fields; and the more fertile fields would of course be retained for cultivation. Every one can figure to himself, the ease and conveniency of a revolution which would so much reduce the extent of his corn fields; and substitute for the labor bestowed on them, the more easy task of providing pasturage and hay. But will not the ox himself when at work require grain food as well as the horse? Certainly much less, if any. Judging from my own observation, I should say, that a plenty of good grass, or good hay, will suffice without grain, where the labor is neither constant nor severe. But I feel entire confidence in saying, that a double set of oxen alternately at work, and therefore half the time at rest, might be kept in good plight without other food than a plenty of good grass, or good hay.

"And as this double set would double the supply of beef, tallow and leather, a set-off is found in that consideration for a double consumption of that kind of food. The objections generally made to the ox are, 1. That he is less tractable than the horse. 2. That he dose not bear heat as well. 3. That he dose not answer for the single plough used in our corn fields. 4. That he is slower in his movements. 5. That he is less fit for carrying the produce of the farm to market.

"The first objection is certainly founded in mistake. Of the two animals, the ox is the more docile. In all countries where the ox is the ordinary draught animal, his docility is proverbial. His intractability, where it exists has arisen from an occasional use of him only with long and irregular intervals; during which the habit of discipline being broken, a new one is to be formed. The 2nd objection has as little foundation. The constitution of the ox accommodates itself, as readily as that of the horse to different climates. Not only in ancient Greece and Italy, but throughout Asia, as presented to us in ancient history, the ox and the plough are associated. At this day, in the warm parts of India and China, the ox, not the horse, is in the draught service. In every part of India, the ox always appears, even in the train of her armies. And in the hottest parts of the West Indies, the ox is employed in hauling weighty produce to the sea ports. The mistake here, as in the former case, has arisen, from the effect of an occasional employment only, with no other than green food. The fermentation of this in the animal, heated by the weather, and fretted by the discipline, will readily account for his sinking under his exertions; when green food even, much less dry, with a sober habit of labor, would have no such tendency. The third objection also is not a solid one. The ox can, by a proper harness, be used singly as well as the horse, between the rows of Indian corn; and equally so used for other purposes. Experience may safely be appealed to on this point. In the 4th place, it is alleged that he is slow in his movements. This is true, but in a less degree than is often taken for granted. Oxen that are well chosen for their form, are not worked after the age of about 8 years, (the age at which they are best fitted for beef,) not worked too many together, and are suitably matched, may be kept to nearly as quick a step as the horse. May I not say a step quicker than that of many of the horses we see at work, who, on account of their age, or the leanness occasioned by the costliness of the food they require, loose this advantage, where they might have once had it? The last objection has most weight. The ox is not as well adapted as the horse for the road service, especially for long trips. In common roads, which are often soft, and sometimes suddenly become so, the form of his foot, and the shortness of his leg, are disadvantages; and on roads frozen, or turnpiked, the roughness of the surface in the former case, and its hardness in both cases, are inconvenient to his cloven hoof. But where the distance to market is not great, where the varying state of the roads and the weather can be consulted; and where the road service is in less proportion to the farm service, the objection is almost deprived of its weight. In cases where it most applies, its weight is diminished by the consideration, that a much greater proportion of service on the farm may be done by oxen, than is now commonly done; and that the expense of shoeing them, is little different from that of keeping horses shod."

Oxen are very extensively used in some parts of Great Britain—the farmers of that country having found a great advantage resulting from their employment. A system has been adopted on many of the large farms, by which a certain number are turned over to the grazier or the butcher every year, and their places supplied by an equal number of a suitable age. In many portions of our own country the prejudices existing against the employment of oxen for farm service is gradually, but surely giving way. The farmer

who consults his own interest, should, if he has not already done so, make a fair and *judicious* trial, in order to ascertain and satisfy himself as to the advantages resulting from the employment of the ox. If he start right we have no fears of the result. Nothing but an unjust prejudice has prevented the general employment of oxen.

Training of Steers.

The following article on the manner of keeping steers we commend to the attention of farmers, as being worthy their careful consideration. We extract it from the Farmer's Series of the Library of Useful Knowledge.

The training of steers, for work, is very rarely committed to any other than the breeder; the animal is found to be more docile, and to thrive better in its own home than in any other, and its sale, for the purpose of labor, is less an object of speculation than that of the horse. The calves are dropped in the ordinary season, and either weaned immediately or allowed to suck, according to the system of grazing pursued on the farm, nor does it appear to materially affect their future thrift or health; but for weaning they should fall about December, and if kept warm in the pens until gradually released from housing, they will be equally forward with calves dropped in the early part of Spring which run with the cow; though the March calf is reckoned the best. They are fed about the orchard, or in a spare field, until late in the spring or summer, and then turned to grass until the approach of November, when they are taken into the yards and fed on such food as can be best spared; but it must be remarked, that on the quality of this will greatly depend their growth and condition, for although a half-fed animal may grow large, he will assuredly become gaunt and awkward, ill set in his limbs, and defective in his shape; he will also come later to the yoke, and, consequently, a portion of his labor will be lost. Though hay may be only given in very moderate quantity to yearlings, yet they should have an allowance of meal and bran, with plenty of roots as well as straw, and although confined to the shelter of the yards and open sheds at night, they should be allowed the run of the pasture in day-time, whenever the weather permits. They are then again turned out as soon as there is a bite of grass in the spring, and the same course followed—with the exception of the meal—until rising three years old, when they may be gently used, just to accustom them to the yoke or collar, and are regularly put to work in the spring of the following year. When broken very young, they become more docile and tractable than when kept to a greater age; they are also thought to apply their strength with more effect to the draught, and, if properly taught, their common natural pace may be certainly much improved. To accustom them to a quick step, they should, however, be at first driven with a very light weight, and should not be heavily laden until they have attained their full growth.

The patience of the ox is proverbial, but though more quiet than the horse, he is yet of various temper, less tractable, and sometimes very indocile; his strength too, though of the same breed, is often very unequal, and therefore considerable attention is requisite to match them. The training, though generally considered an object of great difficulty by those not accustomed to their use, is, in truth, one of the very simplest nature. The great point is to govern him by mildness, and by gentle usage to accustom him gradually to his work, without apparent compulsion or severity; for, if irritated, an impression may be made upon his temper which no after treatment will efface; but with kindness he is easily familiarized and rendered docile. A young steer should be acustomed from the earliest age to be driven about and led; he should be also occasionally handled when about the yards, and when taken up for the purpose of breaking, he should be placed under the hands of a careful steady man of particularly good temper, who should commence by feeding and caressing him. In this process also, a good deal of care and management is requisite, for young stock will not always eat of the food that is presented to them: in some cases, indeed, hardly any thing but sheer hunger will induce them, and if stinted, they will suffer in their health, but if the steer cannot be coaxed by other means the better mode will be to turn him for a few days among older stock already accustomed to other food, from which he will soon learn to consume it. He then should be tied up in the ox-house, and used by degrees to either the yoke and bow, or to a bridle and collar, until gradually accustomed to the gear, when he should be harnessed to a tame old ox, which is made to accompany him gently, without forcing him to his work, and if he offers resistance, he must be patted, encouraged by the voice, and fed; if very obstinate he should suffer hunger, and only be fed after work; he will thus be taught to obey his master, but it should rather be by firmness than by violence. After patiently pursuing this course for a few days, his objection to work with the other oxen will be

overcome; his labor, however, must be very gentle; he should neither be fatigued nor over-heated, for if hurried in hot weather he may be exposed to the flux.

Cleanliness, though not so essential to oxen as to horses, should be also attended to; his feet and legs should be well washed, and his coat be wisped over after he has worked; and this kind of care, though too commonly neglected, will tend to keep him in spirit and condition. He should then form one of a pair, which should be yoked together; or, if there be a pair of well broken-in oxen upon the farm, the most advisable plan is to yoke the young ones behind them: and as the spring is the usual time of doing this, they may be attached to a moulding-sledge or bush-harrow, upon grass-land, and thus be made in a slight degree useful even in the breaking. After two or three trials in this way, they may be put to harrowing fallow-ground; but for the first few weeks it is generally found advantageous to let them follow older oxen. When thus broken-in at two years old, they give very little trouble, and become gradually accustomed to every kind of work. It is, however, to be understood, that oxen are unfitted for much labor until they have reached their third year; therefore, until they are thoroughly trained, they should only be employed at short intervals; but it is from that period, until they are six years old, that they are most active and useful in the draught. By this time, too, they will fully have attained their growth, and their value, instead of increasing, would be lessened, as they fatten more readily before seven years of age than they do after it, and make finer beef. It is generally observed that, although aged oxen have the advantage in strength, yet the younger ones are decidedly preferable for all light work, which requires more speed.

On farms where oxen have not been already employed, the young steers may be very readily broken-in to work by having an old steady horse put before them. We cannot, however, but advert to a common practice, which, though prevalent chiefly among small farmers, is yet by no means unusual on many larger concerns—of pairing horses or mules together at the same work with oxen, which, of all the preposterous customs ever sanctioned by ignorance, seems the most absurd. A sluggish ox is thus sometimes coupled with an active horse: at first the latter exhausts his strength, but at length, finding his advantage in moderating his pace, he adopts the slow step of the former, and, having once acquired the habit, it soon becomes fixed, and he suffers great injury in his value. A single horse is in that manner often added, either as a wheeler or a leader, to a pair of oxen, from an idea that such a mode of draught is more handy than when oxen are employed alone, but it is a custom which no plea can really excuse.

Oxen, though usually worked in pairs, are yet often used in double couples, and driven by a boy, whose chant, which is continued with unabated ardour throughout the day, the ploughman throwing in at intervals his hoarser notes, is in many parts of the country thought to have a very peculiar charm in cheering them on to their labor. Nor is the lad's time thus wholly thrown away, for he must himself learn to drive and hold, and the expense forms but a trifling additional charge upon a team.

There is also another, and a very simple mode adopted by many foreign farmers to induce obstinate steers to take kindly to their work, without either loss of time in attendance or unnecessary force, and merely by acting upon their appetite. According to this plan the animal is harnessed, and fastened by the collar to a cord or chain, which runs in a ring, to which a weight is appended at the manger, which he can approach or retire from at pleasure. Another weight is then hung to his traces by the center of the splinter-bar, and rests upon the ground, passing through a pully upon which it moves. The weight to which the steer is thus attached may be about a cwt., or more, and he is then placed at the full length of his chain from the manger, which is filled with provender, and he cannot approach to eat without drawing the weight after him. In this manner he soon accustoms himself to move the load, and in the course of a fortnight he will probably be tamed without further trouble, of which the preceding cut (Fig. 45, at the head of this number) will afford a clear idea.

For the Farmer's Cabinet.

The Observer--No. 1.

I have observed a remarkable propensity in most men, to set up what they call facts, on evidence altogether insufficient to sustain them. From these presumed facts, they too often draw hasty and premature conclusions by incorrect reasoning. I have also observed a strong inclination to indulge in theoretical speculations. An abundance of theories are thus formed, having no better foundations, than the suppositious facts on which they are erected. Those facts and conclusions, and those theories, constitute the greater part of what is supposed to be known, in re-

lation to many subjects of practical interest to the community.

These propensities, when improperly indulged, are extremely injurious to the extension of useful knowledge—and can only be remedied, and the errors to which they have led, corrected, by instituting a more careful observance of facts, and adopting a more rigid and certain mode of reasoning upon them.

The study of the exact mathematical sciences, is admirably suited to the promotion of this object. They allow of no suppositions—no conjectures—every thing which does not admit of satisfactory proof is rejected. If such studies could form a part of the education of every child, they would insensibly lead into habits of cautious and rational investigation, well calculated to ascertain truth, and expose error. Unfortunately this cannot be done under the existing circumstances of society.

Another serious obstacle to the advancement of knowledge, is, the dissensions which exist between *practical operators*, and *theoretical speculators*—This is not as it should be. In every rational inquiry, theory and practice should go hand in hand. As co-laborers, they should mutually assist, instruct and encourage one another; and not, as enemies, try to heap obstacles in each other's way.—*Experience* alone can furnish *facts*—but *theory* must arrange them in the proper *order*, form them into a *system*, and establish upon them those general *conclusions* which constitute *science*.

There are few subjects, to which the foregoing general remarks will more properly apply—few, on which we have greater need for well ascertained facts, and more satisfactory theories, than that of the diseases of our domestic animals. And why is it so? Because they have been, too generally, subjected to the management of persons who have never been taught to observe and analyze phenomena—to investigate facts—and to draw conclusions from them, with sufficient care. They have adopted the erroneous opinions of their forefathers, and handed them down to their successors, with a veneration due to well-authenticated truths; without ever submitting them to that necessary ordeal, which a knowledge of the healthy and diseased conditions of the animal organs would justify and require. It is, indeed, indispensable to a correct understanding of disease, that we shall first acquire a knowledge of what constitutes health. We cannot understand in what manner the animal functions are disturbed, without possessing a previous knowledge of their healthy state. The most careful and minute inspection of diseased parts, can yield but little information to one who has not acquired a previous acquaintance with their natural appearances, and healthy structure. Without such an acquaintance, the natural condition may very easily be mistaken for a diseased one—and the appearances sought for, may, as easily, be overlooked. The nature of disease can only be inferred, from a careful comparison of the deranged state of the functions and structure of the diseased animal organs, with their natural healthy condition. If my views are correct, it will follow, that the knowledge we possess of brute diseases, is vague and uncertain—that it contains many erroneous dogmas, and much useless lumber, which ought to be expunged—and that the whole requires a close revision and correction.—To effect this expurgation of "stabularian ignorance and empirical confidence"—it will often be necessary to commence at the beginning of the chapter. To study, first, the anatomical structure and healthy functions of the animal organs. Then by a cautious observance of the signs of disease, and a careful inspection of the organs, after death, we shall be able to ascertain the nature of the malady. Having determined the nature of the disease—and not until then—we may hope to arrive at safe, and successful principles, to guide us in the treatment. We can no more expect success from ignorance and quackery in the treatment of a brute animal than a man.

These observations are not intended to introduce me to the "Cabinet" as a regular essayist on brute diseases, but to point out

the proper course for those who may wish to pursue the subject. With a view to promote inquiry, I propose to make some remarks on the anatomical structure, physiological uses, and pathological states of the horns of domestic cattle. This may lead into occasional digressions respecting the horns of some other animals, and will necessarily involve the consideration of other organs connected with them.

Anatomical Structure of the Horns of Animals.

Horn—in a general sense, denotes a callous protuberance growing from the heads of certain kinds of animals. *Horn*—in its strict signification, means, a peculiar fibrous substance, which forms the exterior covering of the horns of the ox, sheep, goat, &c.

The horns of animals differ in many remarkable particulars, some of which, it may be proper to notice. They may be divided into four several sorts.

I. Such as consist entirely of a solid mass of horny, fibrous matter. Horns of this description are found in the rhinoceros.—Instead of occupying the usual position on the *os frontis*, they are placed on the ridge of the nasal bones, below the eyes. Sometimes there is only one, as in the R. unicornis, or one horned rhinoceros—sometimes two, as in the R. bicornis, or two horned rhinoceros. In the latter case, they are both placed in a vertical line on the ridge of the nose.

II. Such as are composed of an outside horny shell and an interior cavernous bone. These horns are found in the ox, sheep, goat, and some kindred genera. At a very early period, a small bony tubercle may be felt, easily movable, under the skin; which gradually enlarges, and protrubes, the skin covering its extremity. This skin, at length, becomes callous, loses its vitality, dries, and falls off—leaving the bone covered with a casing of horn. During the developement of the horn, its bone becomes anchylosed, or united with the os frontis, and a communication formed from the inside of the horn, into the cells of the skull. The core is nourished by the *periosteum*, or skin which covers it, and lines the skull. The skull, or true horn, continues to grow from the root, in the same manner as hair, hoofs, nails, &c. The great peculiarity of this sort of horn is the hollow, or cavernous structure of the bony interior. In order to elucidate the subject, of which I propose to treat, it will be necessary to examine this structure more minutely.

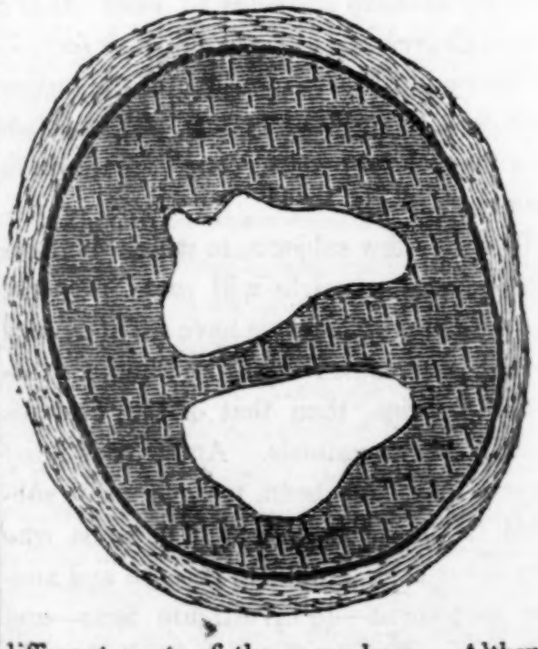
If a horn be sawed across, in its middle, or larger portion, so as to exhibit a transverse section, it will present the following succession of parts, viz.

1. The outside shell or horny covering. This is composed of an assemblage of delicate hair-like fibres, which run from the root to the apex of the horn, and are agglutinated together, so as to form a compact mass.—These fibres appear to grow out, *collectively* from a vascular pulpy root, in the same manner that hairs do *individually*. The hoofs and claws of animals, and the nails of the fingers, are produced in the same manner.

2. Immediately within the skull, we observe the *periosteum*, surrounding the bony pith. This is a tough membrane, amply supplied with blood vessels for the nourishment of the bone. A similar structure accompanies bone in almost every instance, and is designed for the same purpose—to nourish it.

3. We now come to the core, pith, or bone of the horn. When the shell and periosteum are removed from the pith, it presents an exterior form, very similar to that of the entire horn, only shorter, and less pointed. Its structure is soft, and spongy, but it presents no appearance of being hollow. When sawed through in the manner I have mentioned, it, however, appears as a thin, bony shell, containing a very large cavity. The interior is rendered extremely irregular by variations in the thickness of the bone, and still morre, by numerous ridges and partitions of bone, which run lengthwise of the cavity. The sides are found to vary from less than one-eighth, to more than half an inch, in

Fig. 56.



different parts of the same horn. Although the cavity seems to be divided into smaller cells, yet they are all found to have a free communication with each other. These plates, or partitions, of bone, add greatly to

Fig. 55.

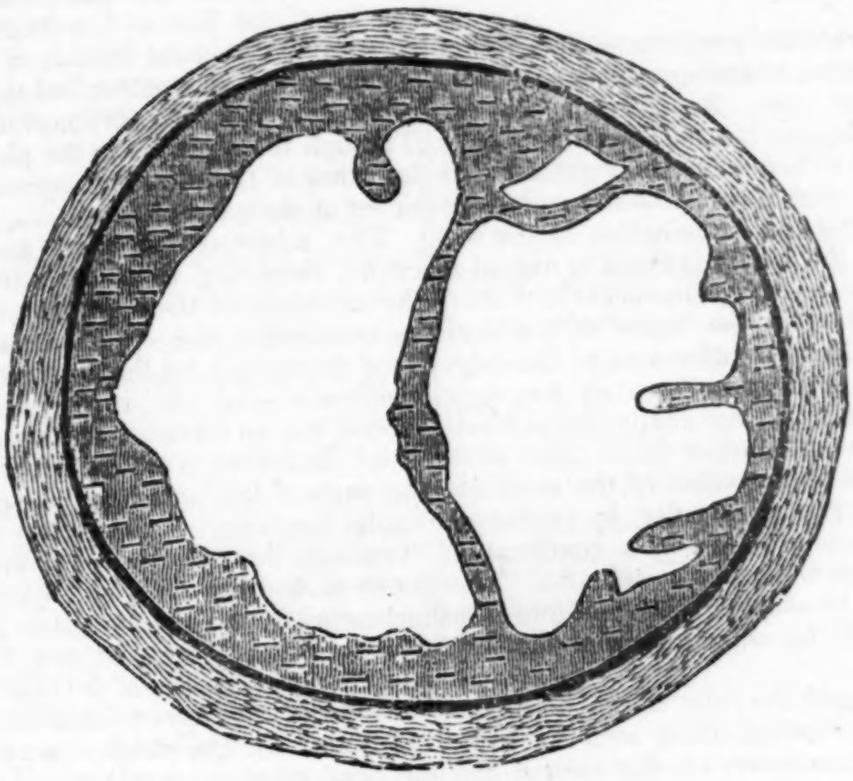
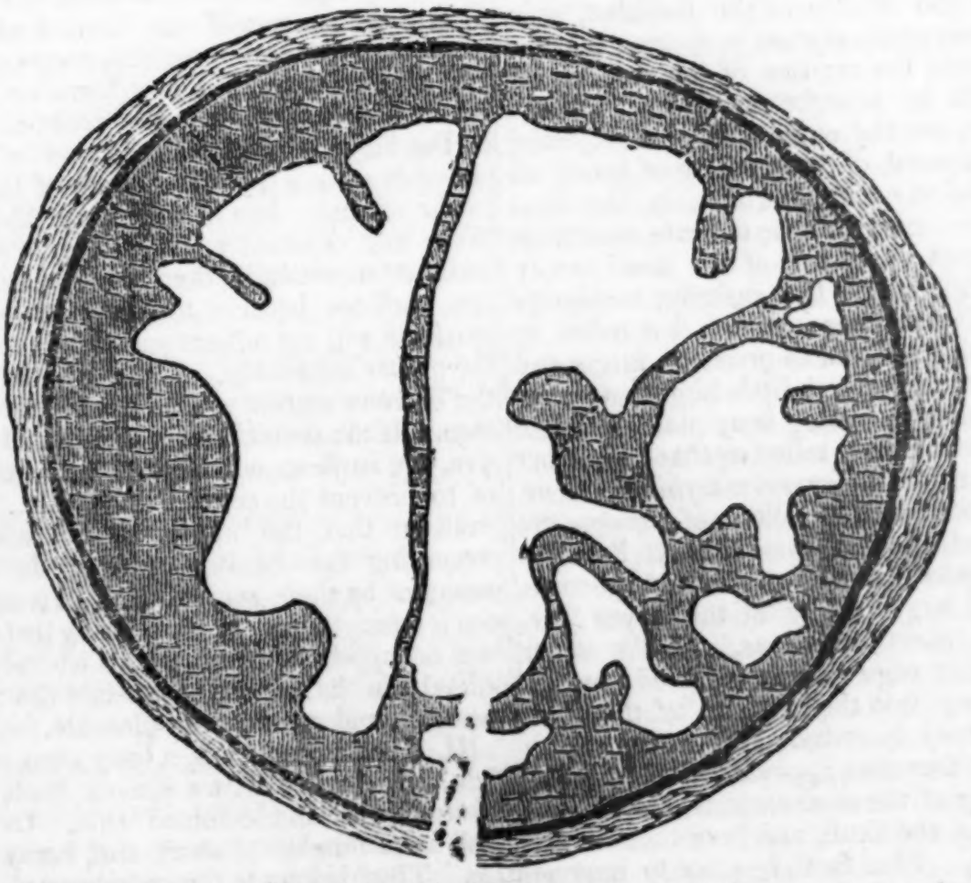


Fig. 57:



[The figures represent sections of three healthy horns about of the same age, and taken near the root. In the horn from which fig. 56 was taken, the cavity did not reach more than one-third the length of the horn. The darker circle represents the periosteum.]

the strength of the horn, and, at the same time, enlarges the interior surface, and gives greater expansion to the part next to be noticed.

4. The *internal periosteum*, or *sero mucous membrane*, which lines every part of the cavity of the bone. Rising over the partitions and dipping into the intervening cells, it presents a suface many times greater than would line a simple cavity of the same size

By carrying the examination to the root of the horn, the cavity is found to extend in that direction, and to communicate with other cavities formed in the bones of the skull and face. These cavities occupy the ridge between the horns, pass down on the right and left of the brain, and finally communicate with the nose at its upper part. Like those of the horns, the cavities of the skull are rendered extremely irregular, by projecting bony plates, and are lined by a continuation of the same sero-mucous membrane. This structure can be effectually brought into view by sawing off the outside plate of the face of the skull.

Having traced the cells of the horn and skull to their communication with the nose, I will now commence at the nostril, and examine the nasal structure—constituting the organs of smell. If the head of an ox be sawed through longitudinally, from the nose to the middle of the forehead, so as just to escape the *septum* or division between the nostrils, the cavities of the nose, on one side, will be brought into view. Within the nose, on the outer side, is a projecting body composed of a thin plate of bone, curiously rolled upon itself, and, in the fresh subject, covered with the delicate membrane which lines every part of the nasal cavity. This part is called the *inferior turbinated bone*. The manner in which it is rolled up is admirably adapted to present a large surface in little space. A little higher, we meet with another projecting bony plate, which is even more curiously rolled up than the former one. It is called the *superior turbinated bone*. When united with its fellows of the opposite side it constitutes the *ethmoid bone*. Between the turbinated bones there is a large aperture, into a still larger cavity of the upper jaw, called the *maxillary sinus*. At the upper and exterior edge of the ethmoid bone, is the opening into the cavities of the skull bones, already described. By tracing these cavities, it therefore appears, that the internal opening of the nose extends into the upper bones of the skull, and from thence into the horns. This fact I wish to impress strongly on the minds of my readers. *The hollow in the horn is a part of the cavity of the nose, and lined by a continuation of the same membrane.*

The ethmoid bone, occupying a central position in the upper part of the nose, next the brain has a broad plate, which forms a portion of the floor of the brain-pan. It is pierced with a great number of small holes, like a sieve, and thence called the *cribriform plate*, or a sieve-like portion of the ethmoid. Through the openings in the plate, pass the branches of the *olfactory nerve*, or proper never of the sense of smell.

The whole of this vast and irregular cavity, extending from the nostril to near the extremity of the horn, may, collectively, be considered the organ of smell. It is lined throughout by the same sero-mucous membrane—and the same economy is observed, viz. an increase of its secreting surface. But there is reason to believe that all the parts of this structure do not perform similar functions. The olfactory nerve, after its passage through the cribriform plate, appears to be disturbed, chiefly, on the two turbinated bones, and the parts in their vivinity. It is not believed that they extend into the upper cavities of the head and horns. Particles of odoriferous substances separate and float in the air, which, when inhaled into the nose, come in contact with the sentient extremities of the olfactory nerves, and thus produce the sensation of smell. The position of the turbinated bones, standing in bold relief in the passage of the inhaled air, and presenting so large a surface, seems admirably adapted to receive the impression of any odorous matter which it may contain.

But the perfection of the sense of smell depends upon a particular state of lubricity of the organs. In a natural state, their surfaces are constantly bedewed with a sero-mucous secretion of their own vessels. If the surfaces become too dry, the odorous particles will not adhere sufficiently to make the proper impression. If they are too moist, the odorous matter will be washed away too soon. If the secretion is too thick and adhesive, the surfaces will be covered so thickly as to prevent the contact altogether. It is probable that the upper cavities assist in preserving this healthy state of the nasal passages by their secretions. This conclusion is strengthened, by considering that there does not appear to be any means whereby the animal can introduce the air into the upper passages, and remove it at pleasure.

III. Such as consist of a bony stem, or pedicle, surmounted with a convex knob, and covered with the common skin. On the knob are a number of short, stiff, horny bristles. They belong to the cameleopard.

IV. Such as are composed of solid, naked bone. They are found in the deer family. A remarkable peculiarity of this sort of horns

is, that they are shed, and re-produced annually.

Horns generally serve as weapons of offence and defence.

In my next, I shall consider the pathological, or diseased states, of the horns of cattle.

New-Garden, 12th mo. 31st 1836.

Live Fences.

To the Editor of the Farmer's Cabinet.

I have heretofore stated the manner of treating the plant until it arrives at about one inch diameter at the ground. *This* will treat of the process afterwards, which is as follows, viz:—Each alternate (or every other) one is cut at or near the ground, about half off, or sufficiently to allow them to be leaned or bent in a line over the row at an angle of about forty-five degrees from a horizontal line. The uncut plants are then bent at right angles to the row, each alternate one in opposite directions, sufficiently to allow the cut plants to pass between them and be adjusted at an angle of forty-five degrees as aforesaid; the uncut plants are then permitted to press against the cut ones and keep them in their proper places. The whole are allowed to grow till the uncut plants are about two inches in diameter at the ground; they are then cut off about six feet from the ground, and the other parts trimmed or clipped, sloping from the top downards on each side at an angle of about forty-five degrees from a vertical line; and trimmed each year afterwards. Near the termination of each annual growth is a good time to trim them. A very convenient instrument for trimming the hedge, is one made in the form of a broad sword, with a handle suitably formed for the operator to use both hands at the same time. If the fence made in this form should not be sufficiently strong to guard against all kinds of stock, the plants at the last cutting, instead of being cut entirely off, six feet high as aforesaid, may be cut about half off and bent downwards toward the ground, each alternate one on opposite sides; or every third one may be laid nearly or quite horizontally, and in a line with the direction of the hedge, and the other two-thirds bent downwards as aforesaid, each alternate one on opposite sides of the hedge. The parts thus bent can be secured in their proper places by interlocking some of the branches with the parts beneath, (or the vertical parts,) and a proper form given to the hedge by trimming, either at the time these parts are thus laid on, or at the termination of the annual growth, as may be most convenient.

If the proper form can be given to the hedge, without cutting off any part of the plant, previous to laying the same, none should be lost, because the first growth is superior to the second. The principal objects required in the fences are closeness at the bottom, to guard against small stock; height and strength at top, to guard against large animals, and a form, &c., likely to prevent premature decay.

If I should discover any form or mode of treatment superior to the foregoing, or any plant which seems to answer the purpose better than this, perhaps I may be able to make a communication to you on the subject.

The plants should be guarded by dead fences until the live fence is completed.

Chester County, Pa., Dec. 26, 1836.

P.

Fertilizing the Soil.

The golden rule in agriculture is to apply such manures and tillage as will make heavy land lighter, and light land heavier, cold land hotter and hot land colder. He only is a farmer who knows and follows this rule.

Lands are seldom so rich but it may be a matter of gain to increase their fertility; and few tracts are so poor but that with proper tillage and manuring, they may be made the residence of plenty.

Manures are composed of all those substances which either directly or indirectly, supply plants with their requisite food, by means of which they are enabled to expand and come to maturity.

In the first place the different earths will serve to manure each other. Thus, clay is a fertilizer of a light sandy soil, and sand is equally a fertilizer of clay. Where clay is applied to a sandy soil, it should be carted on in the fall, and spread evenly over the ground, that the frost may pulperize it before it is mixed with the soil in the spring.

The better these earths are mixed in the respective soils, the more sensible and immediate will be their effect; but their principal excellence is that they are calculated per-

manently to improve the soils to which they are applied.—Stiff loams are also in the same way assisted by sand, and sand again by these; but neither in so great a degree as in the former case. Generally it may be observed that all light, dry soils are improved by being mixed with heavy earths, and *vice versa.*

Sand and fine gravel will greatly fertilize the soil of bog meadows, and this earth again is very good manure for all upland soils. It is peculiarly excellent for Indian corn when applied to the hills, and is very good for flax, hemp, and most other summer crops. Like gypsum, it is friendly to the growth of white clover. When applied to upland grasses it should be laid on as a top dressing. Every kind of black mud from ponds and swamps, answers a somewhat similar purpose; though if the mud be stiff and clayey, it should only be applied to a light dry soil.

The different sorts of marl found in bog-swamp are also excellent manures for all upland soils. These earths are usually found at the depth of from one to three feet from the surface, and are either of a white, gray or brownish color. The former is the most efficacious, and the latter the least so, their strength being in proportion to the quantity of carbonate of lime they contain. It is best to mix these earths with the mass of black earth or bog dirt, that forms the upper stratum, in order to reduce their strength, and when thus mixed, a load of even the weakest kind is more efficacious than two of common barn dung.

Their operation as manures is similar to that of the Nova Scotia gypsum, have little or no effect when first applied to wheat and rye; but by its afterwards covering the ground with a thick growth of white clover, it is then rendered fit for producing largely of these crops. The same may be observed of the bog dirt.—Like this, these marls are peculiarly excellent for Indian corn, and all summer grain, and a less quantity is sufficient. They may be used as top-dressing or otherwise.

Ashes as a manure are found to be more efficacious in some parts of the country than in others, generally most so when applied to lands near the ocean. In some parts where the soil is extremely light, and the bottom sand, the farmer can afford to pay twelve and a half cents a bushel, while in other parts, they are suffered to lie untouched about the potasharies.

Ashes generally answer the most valuable purpose when applied to Indian corn, particularly where the soil is not suitable to this plant. Where the soil is wet, cold, loamy or clayey, the plants are apt to get stunned with the cold rains which usually fall after planting; and then the ashes serve to supply the natural deficiencies of the soil, till it becomes fertilized by the sun.—But when the soil is natural to the growth of this plant, and there is no danger of its being stunned at its outset, perhaps it may be better to apply the ashes later, so that the plants may derive the greatest assistance from this manure, while the ears are setting and forming.

Ashes should generally be used for top-dressing; their salts lose nothing by exposure to the air, and soon find their way into the soil.

Soot is much more efficacious than ashes; besides salts, it contains oil.—The soot of coal is esteemed equally as good as that of wood. It is used for top-dressing and requires about, 40 bushels for an acre. When applied to winter grain it should be sown in the spring; and the same may be observed of ashes. Coal soot is particularly very good for meadow lands which have become sour and mossy. This manure, can however, only be had in considerable quantities in large towns.

Of salts, which serve as manures, the principal are the common sea salt, urine, stale of cattle, sea water, salt petre and alkaline salts. To the latter, the virtue of ashes, as a manure, is principally owing. Soapsuds is in part valuable on account of its alkaline salts, and perhaps the naturalized oil it contains adds much to its value. It is usual to throw this manure away; but this is a needless waste. It may be taken in the watering pot and strewed over the garden, where it will be of great service as a manure and in expelling insects.

Size of Farms.

We know not when or where the following article on the size of farms was first published; but we commend it to the attention of our readers, as affording some useful hints on a subject of interest.

An obstacle in the way of good husbandry in the west is the size of the farms. Very generally they are too large. The cheapness of land offers an inducement to the farmer to procure a large tract. And the fashion being set, he who has not three, four, five or six hundred acres of land, is not considered a farmer on a respectable scale. This thing, I have no doubt, operates detrimentally to the general interests of agriculture, and to the individual disadvantage of proprietors. If a man possesses the means of purchasing a farm of five hundred, or even five thousand acres, and then, of suitably improving, stocking, and cultivating it, it might operate well enough as regards himself. But it too generally happens that the farmer settling among us purchases land to the full extent of his means. Then, if unimproved, his improve-

ments must progress very slowly, and will be at least imperfect, if not very inferior. His grounds partially cleared, his enclosures insecuse, his barns and stables (if perchance he have any at all) mere temporary sheds, and his own dwelling, a poor, contracted, uncomfortable cabin; and all this for the sake of having a large farm. But the mischief ends not here; it is perhaps still more injuriously manifest in the cultivation. A large farm requires large fields and crops. Accordingly, you see a field set apart for corn, of the contents of one hundred acres. But the deficiency of means will not admit of thoroughly breaking with the plough, perhaps not at all, and the poor substitute of furrowing out, as some call it, is resorted to. The after culture of the crop is in keeping with the commencement, and nature would not be true to herself if she did not give such a harvest as such culture deserves. What there is, lies neglected in the field, or unhoused at some other point, until unruly animals, allured by bad fences, claim a large *tithe* of the product, or till the storms of winter destroy a large portion of the summer's labor. Now suppose this whole business put upon a smaller scale, and graduated by the means of the proprietor: suppose the quantity of ground tilled twenty, instead of one hundred acres. This well broke, and ploughed and hoed, and weeded in after culture, timely gathered and well secured, the profit would have been probably a hundred per cent. better.

Besides all this, it is only where farming is carried on a smaller scale, generally, that you witness that universal neatness and taste and finish which throw around the whole scene a sort of rural enchantment, which attracts and impresses every beholder. And the thing is most easily accounted for. The whole is under the farmer's own eye, and within his own means, and wrought chiefly if not exclusively by his own hands and those of his healthy sons. He seeks not to be proprietor of an agricultural *empire*, in extent, but to create an agricultural paradise of concentrated attractions and beauties.

It is to the small farms in every country that you are to look generally for the best models, the finest taste, the most pleasure, and the largest profits upon the investment.

I am confident that fifty acres, cultivated in the very best style of modern improvements, would yield more profit than many of your five hundred acre farms now yield.

It is an excellent rule never to take in hand more ground than you can cultivate in the best manner; for be assured, that if you calculate to make up the defects of culture by increasing the quantity of ground thus defectively cultivated, you will find yourself greatly in error.

From the Caltivator.

Systematic Farming--Underdraining--Ruta Baga.

"The short time I have been engaged in agricultural pursuits, and the little practical knowledge I have obtained, will necessarily render any communication from me at this time, comparatively of little interest—yet such as I can give, is at your service. My farm contains 400 acres of upland, and consists of several varieties of soil, but mostly a deep gravelly loam, upon a very tenacious clayey sub-soil. I came in possession of this farm, and first turned my attention to agriculture, in the spring of 1835. None of the land had been half tilled, and some of it had been cropped so long without being manured, that nature had rebelled against the thankless task-master, and refused to produce any thing worth the husbandman's notice. I commenced a thorough and uniform system of improvement, by ditching, seeding, and manuring,—dispensing my favors with an unspring hand, and without other regard to the expense, than noting the amount in my journal. The consequence has been, I have brought lands that did not produce enough to pay the expense of cultivation, to a state of beauty and fertility, and obtained a rich reward for my labor. And what is worthy the attention of those farmers, who say they cannot afford the expense of improving their lands, is this fact, that the increased product of a single year has more than paid the whole cost. As a specimen, I will give an account of a lot of fourteen acres, which had been mowed successively for near thirty years, and the year before it came into my possession, cut but six tons. One third of the field was too wet to grow any thing but swamp grass, and its improvement was mainly brought about by the under-draining.

My account with this lot for the years 1835-6, stands thus.

Dr.	*Lot No.* 3—14 *acres.*	*Cr.*
1835, April 20—100 rods under-drain a4s.	$50 00	1835, July 20—30 tons pretty good hay a $10	$300 00
5 days drawing stone a16s.	12 00		
300 loads manure a 3s.	112 50		
½ ton plaster a $8	4 00		
Grass seed,	10 00		
July 20—Getting in hay,	31 50		
Interest on land,	49 00		
To balance,	31 00		
	$300 00	Profit,	31 00
1836. March 17—50 loads manure a3s	18 75	1836, Aug. 2—35 tons superior hay a $12	420 00
Grass seed,	2 50		
Aug 2—getting hay	37 50		$451 00
Interest on land,	49 00		
To balance,	343 25		
	$451 00	Profit,	343 25

Contrast this with the product of 1834.

Labor getting hay, say	$20 00
Interest on land,	49 00
	$69 00
Credit by six tons inferior hay, say $8,	48 00
Actual loss,	$21 00

The same result has followed all my efforts to improve my fields, and I am fully persuaded, that no amount of labor or money, can be expended in the cultivation of the soil, that will not reurn four fold to the granary, or the store house. Yet these facts are lost upon the mass of farmers, already too wise to learn—who are contented with obtaining from their lands, one third the quantity they are capable of producing—apparently contented too, to deprive themselves of the comforts, luxuries, and rural embellishments, that make a home pleasant, and life a blessing; and continue to jog on in the path their fathers trod turning neither to the right hand nor the left, though the bright goddess, plenty, with happiness and honor in her train, invites them at every step.

I would recommend under-draining to the serious attention of every farmer. Without it, the richest portion of my farm would be unproductive, and I have observed many fine fields, not only lying useless, but disfigured by cat-tails, rank weeds, &c., which a few dollars expended in judicious draining, would make the most profitable and ornamental part of the farm. In making drains, I have dug a ditch three and a half feet deep and two feet wide, and filled half full, with round stones, taking care to leave a number of places for the water to pass, or else placing large stones upon each side and laying a flat stone across, leaving but one passage for the water, and fill up with earth. Both kinds appear to answer well, but I prefer the first, as by dividing the water into several streams, there is less fear of undermining.

My crop of ruta bagas has not been so large as some I have seen noticed in the agricultural papers, yet it has been extremely profitable, and as food for stock, has far exceeded my expectations. I have made no positive experiments in feeding, to ascertain its relative value, but I have no doubt from what I have observed, that it is worth half as much as corn for fattening, and for milch cows and sheep, I know of no article of food that will compare with it. By the aid of the drill barrow and cultivator, the cost of raising, per acre, is certainly not so much as corn, while the produce is about twenty times as much. I sowed the present year two and a half acres, the 20th June. The ground was laid in gentle ridges two feet apart, and the plants, when thinned out, stood ten inches from each other in the rows. I think one foot by two and a half would have been better. At harvesting I measured off 12 square rods, and found the product to be one hundred bushels, which would give 1,333 1-3 bushels per acre. My average crop, however, fell considerably short of this, owing to early drought and the insects; yet this shows what may be raised, under favorable circumstances.

I cannot close this communication without urging upon every man who tills an acre of ground, the importance of taking an agricultural journal. It has been of incalculable benefit to me, and much of my success in farming is to be attributed to the knowledge I have obtained from the pages of the Cultivator. Yours, with respect,

L. CHANDLER BALL.

Hoosick Falls, Rensselaer county.

Farmer's Work.

This is a fine month for business, brother farmers;—though the earth is bound in frost, there is much to do. An early start these short days is essential to success in business. Long evenings will afford much leisure for social chat—visits, reading, reflection, and so on and so forth, which should not interfere with affairs of the first importance. Perhaps an old croney, Jack Frost, may trouble you, with his solutations these cold mornings, and take you by the ears as he gives you a cordial grasp of the hand. None are exempt from his officious visits and intrusions; as a modern poet justly observes—

"He pinches the prince at the nose;
He's never a servant to fear;
He seizes his heel and his toes,
And gives him a nip at the ear."

RANDALL.

But a little stir and activity will keep him at a respectful distance. He that prepares for the surly blast and goes forward enjoys life, while the lounger that is dosing over a lean fire, burning his shins and freezing his back, smoking his pipe and quaffing cider, works much more hard, in laboring to kill time, than do the industrious in pursuing their occupations with pleasure and success. Besides the latter have great advantage as to health—the busy will not *wear out* half so soon as the lazy will *rust out*. See to your wood pile. Is it in a growing state or in a decline? If the latter be the case consider whether it will bear the waste for a year or more. Every farmer should provide as early as possible in the winter a sufficient quantity

of fuel for one year's consumption. Wood may be procured with one half the labor that will be necessary after deep snows; and one day well employed now will save one or more in the busy season of summer.

Wood that is cut in the spring, when the sap has ascended, is worth much less for present use, or for seasoned wood, than that which is felled in winter when the sap is down. If used green it requires more heat to dissipate the extra moisture before it will burn; and it is likely to become partially decayed in seasoning, unless more pains are taken to split it fine, expose it to the sun or shelter it from rains.

See that your wheels, carts, harrows, plough and other implements, are housed, if they have been carelessly neglected until now. It is of great importance that these things should be secured, as they often suffer more from exposure than from use—they frequently decay before they are half worn. A penny saved is two pence clear, says Franklin. A farmer sometimes spends several days in making a good hay cart, which might be housed most of the time, and would last many years; and it would be much lighter than one made of green timber. But it is left where it was last used, exposed not only to the weather but to the cattle, which destroys it in the course of the winter. A day or more must be spent in summer to repair this loss, for he that has not sufficient foresight to take care of his implement will never make or repair them till they are needed. This is but a specimen of the trouble and expense that fall to the lot of the careless and improvident for the want of good management. Many such trifles amount to something of consequence in the course of a year. No wonder that such work hard, are always in a hurry, and yet find that their work drives them, and that time keeps so far ahead that they labor in vain to overtake him.—*Yankee Farmer.*

From the Virginia Farmer's Register.

On the proper management of Posts with reference to their durability.

Perhaps there is no subject connected with agriculture, on which a greater diversity of opinion prevails than the question, whether with reference to their durability, posts should be put in the ground green or seasoned? When I first settled, I took considerable pains to inform myself on this point, by consultation with those whose experience should constitute them proper fountains of information. The diversity to which I have alluded, impaired greatly the acquisition of defective results. Mr. Thomas Thweatt, of Dinwiddie, (a gentleman of great judgment and observation on all agricultural subjects,) related to me a circumstance which contributed much towards the attainment of my object. He stated, (if my memory be correct,) that in the erection of his garden—a number of posts as he supposed, were prepared and suffered to remain until they were thoroughly seasoned. Its completion, however, required one in addition, which was taken from an adjacent tree and immediately put in the ground. Seventeen years had elapsed, and every post had rotted down except that one, which remained sound. In the progress of my investigation another instance was related in which an entire side of a garden exhibited the same results. My own limited experience furnishes an incident worthy of being mentioned. My garden enclosure was erected of posts while green. Several pieces remained exposed until they were completely seasoned. Out of these a horserack was constructed, which was entirely rotted down, while every post in the garden remains firm. From these facts I deduce the belief, that a post planted when green will last longer than one previously seasoned; and for this reason, that the operation of seasoning produced cracks in the timber, which admitting the moisture from the ground, cause its decay. I recollect to have read the account of an experiment, proving that the inversion of posts, from the direction in which they grew, operated beneficially. Two gate posts were hewn from the same tree—one was planted in the manner in which it grew, the other inverted. The former rotted while the latter was sound. It was accounted for in this way—that nature had formed valves for the ascension of the sap, which allowed the moisture from the ground to penetrate through the same channel; but that the inversion of these valves, interposed a barrier to its admission. This theory corroborates the idea previously expressed, that the moisture of the ground, alternately penetrating within the timber and in drouths, measurably receding, causes its decay.—Whether the posts should be cut while the sap is up or down, I am unable to determine. A writer in some of the numbers of the American Farmer, states that oak timber should be cut while the sap is up, because it is glutinous and forms a cement, or substance which acts as a preservative.

I have ventured to express these hasty and imperfect reflctions, with the hope that, although they may not impart any useful information, they may elicit some from others. These are controverted subjects, in which every person who erects a gate or encloses a garden is deeply interested—and their further discussion will be valuable, at least to

S.

Management of Bees.

The Kennebec (Maine) Agricultural Society at their meeting last autumn, awarded their premium on Bees to Col. John Gilmore, who furnished the society with the following statement: "Having entered my name for premium on honey and a hive of bees, I will inform you how I have managed them for a few years past. I keep them in boxes—my boxes are 13 inches square on the outside, and from six to seven inches high, with thin slats across the top about an inch wide, with just space enough to let the bees pass between them.—For a young swarm I fasten two boxes together with a board on the top, put in the swarm, and when I set them on the bench, put under as many more as I think they will fill—a large early swarm will fill four or more. I had some this season that filled three in about a fortnight and then swarmed and the young swarms have filled four boxes. After my old hives have swarmed once I usually put under one or more boxes. I prefer this course to letting them swarm again, for second swarms are generally worthless. When the weather becomes cool, if the hive is well filled with honey the bees will all leave the upper box—it can then be taken off without disturbing the bees in the hive. I usually take from my old hives and early swarms one box containing from 50 to 54 lbs, and leave enough for the bees to live on through the winter; or I can take a part and return the box if I think the remainder is insufficient for them. If my bees grow lazy after the swarming season is over and hang out on the hive which is in consequence of the hive being full, I add more boxes. I had a few small swarms which I have taken up otherwise. I have not destroyed any bees. I have taken up on my own farm this season 289 lbs. of good honey in the comb; and I now own, including those that I have taken up, twenty-six hives."

China Hogs—Improved Breed.

Fig. 58.

Mr. C. N. Bement, of Albany, says, in a communication published in the Cultivator, "Having had frequent applications, by letter, for a description of my *improved* breed of China Hogs, I know of no better method of conveying a correct idea, unless by personal inspection, than by a likeness, which I have procured, and accompanies this.

The drawing was taken from a young sow, nine months old, when in high condition.

This superior breed of swine, as I have observed in a former communication, was first introduced here by the late Christopher Dunn, Esp.—Some ten or twelve years since, when passing through Princeton or New-Brunswick, N. J., in the stage, his sagacious eye was attracted by a beautiful sow with her litter of pigs, running in the street. Delighted with their appearance, he was determined to prossess some of them if possible. He accordingly applied to the driver of the stage to procure a pair of them for him. As an inducement, and to insure success, he offered him the liberal price of twenty dollars, for a male and female, although only eight weeks old, on their delivery to a certain house in New-York. They were of course procured and delivered, and from these two have sprung my "*Improved China Hogs.*"

Their color is various, some white, black and white spotted, and others blue and white. They are longer in body than the pure China breed. Upright or mouse-eared—small head and legs—broad on the back, round bodied, and hams well let down—skin thin—flesh delicate and fine flavored.

They are easy keepers, and of course small consumers, quiet and peaceable in disposition, seldom roaming or committing depredations. Keep in good condition on grass only.

They are not remarkable for size, seldom attaining more than two hundred to two hundred and fifty pounds, although instances have occurred where they have been made to reach three hundred! Therefore they cannot, in their pure state, be called the "farmer's hog," but their great value is in crossing with the common hog of the country. A very good hog may be obtained by a cross with your *land shads*,—your long legged, long nosed, big-boned, thin backed, slab-sided, hungry, ravenous, roaming, tormentors, that will run squeaking about the yard with an ear of corn in their mouths."

Agriculture

Has been aptly styled the master sinew of every great state; the perennial foundation of wealth. Rural labors are equally conducive to health of body and mind. The mechanic operations hold only a secondary rank: the culture of the fields constitute the most natural and innocent employment of man. Agriculture clothes our land with grass for cattle, and with the herbs for man. She fills our houses with plenty, our hearts with gladness, and puts into our hands the staff of life. The ancient Republics afford us several instances of generals and statesmen, having exchanged their boisterous employments in war and poli-

tics, for the more peaceful arts of the field and the cultivation of the ground; thus adding to the culture of philosophy that of rural economy and rendering themselves doubly serviceable to their country.

For the Farmer's Cabinet.

THOUGHTS,

Suggested by the Rev. T. Flint's remarks on 'Farming.'*

Sons of America! who love the soil where ye were born!
Methinks the *fields* should be your theme, at evening and at morn:
And you, the favor'd ones of Heaven! who call the lands your *own;*
Whose riches are the yearly gifts, which from the earth have grown—
Oh! let *improvement* mark your steps, go *fertilize* the soil,
Where nature's promise is to bless the efforts of your toil.

The nation's honor, power, and wealth, all flow from one wide source,
From *agriculture*, as the *fount*, each takes its winding course:
Commerce and manufactures own this mainspring moves their wheels;
And all that lives, and moves, the worth of man's *first* charge reveals.

To agriculture's valued power! delighted we would bow;
And ever shall our echo'd song, respond to "speed the plough!"
We love to paint the husbandman, stripp'd to his blest employ,
For though "in sweat of face" he toils, 'tis with a smile of joy:
We deem *him* highest of the race, America can boast;
And here, in honor, do we pledge, to him our noblest toast:—

Hence may his "corn and wine increase," till "milk and honey" flow
Throughout his land, where harvests ripe, in all their richness glow;
God crown the labor of his hands, with "plenty and with peace!"
Till daily toils of husbandman, with *all* of earth shall cease.

CLEMENTINA.

Plainfield, N. J., Dec., 1836.

The Bath Society papers contain the following account of the method adopted at various periods of weaning and rearing calves, as practised by thrifty farmers.

"Mr. Whitley of Wallington did, between the first of December 1776, and April, 1777, wean and rear on his farm ten cows and thirteen bull calves, by the method following: At three days old they were taken from the cows, put into a shed and fed with flet (skimmed milk) allowing three quarts to each calf morning and evening. When a month old, they were fed with a like quantity of milk and water, morning and evening, with hay to feed on in the day time; and at noon they were fed with oats and bran equally mixed, allowing half a peck to one dozen calves. At two months old they were fed only in the morning with milk and water, they had hay to feed on in the day time, and at evening instead of noon, had the same quantity of bran and oats with water to drink. They were fed in this manner until the middle of April, when they were turned out to grass all day; and taken into a shed in the evening; and fed with hay until there was plenty of grass, and the weather grew warm. Such of the calves as were weaned in March were continued to be fed with milk and water every morning until midsummer. All the said calves are in good health and condition; and the Society allowed the premium offered on that head the preceding year.

Agriculture is an art—Man is the artist,—the soil is his laboratory,—manure his raw material,—animal strength and machinery his power,—air, heat and moisture his agents,—and grains, roots, fruits and forage, his product.

Agriculture is a science—which teaches the artist the best mode of improving and fitting up his laboratory,—instructs him in the properties and economical use of his raw material,—learns him how best to apply his power, and to profit by his agents,—and it thereby enables him greatly to abridge his labor and multiply his products.

The art teaches the hands *to do*—the science *what* to do, and *how* to do. Art is the sail which propels the ship,—science the compass which directs her course. Without the sail, the ship will not "go ahead;" without the compass, her course will be erratic, and the profits of the voyage doubtful. With sail and compass, her progress will be "onward," her course direct, and her voyage prosperous.

Don't be frightened if misfortune stalks into your humble habitation. She sometimes takes the liberty of walking into the presence-chamber of kings.

Economy of Manures.

Parkhurst, an eminent British farmer and agricultural writer, who resided some years near Baltimore, in speaking of our economy in manures, says, that

"The farm yard manure in that country

* See Farmer's Cabinet, No. 2, page 27.

(the United States) is of little value; for it is ill managed, the straw weak, and the generality of horned cattle so poor, that their dung is light and worthless."

Now if this charge be true, as there is too much reason to believe it is, let us not scold at the exposure of our fault, but set to work in earnest to remove the reproach, by making our straw stronger, our cattle in better condition, and our manure, consequently, more abundant and valuable.

Lime on Potatoes.

Our friend says, "I learned on inquiry of a quiet experimenting and scientific man, that raised potatoes of the best quality, by simply dropping into the hole with the potatoes when he planted them, about half a pint of slacked lime, and never knew the crop to be bad in quality or small in quantity.

I tried lime after this fashion, and had not a few horse laughs from old potatoe planters for so doing.

Well, "Let them laugh that lose, for they who win will laugh." I did win; for where for many years before I had raised potatoes of the very worst quality, in the old way. with the lime dressing alone, I raised potatoes of the very best kind. My Chenangoes were uniformly dry, sweet and abundant. The results were the same the two past seasons, both on a light, sandy loam, and on a stiff, clayey ground. Lime put into the hill, manured with rock-weed, will, it is believed, counteract the bad effects resulting from this kind of manure. Try it, farmers, believe me *this* 'experiment' will not rob your pockets: try it. One *good* potatoe is worth two bad ones for man or beast.

Burn your Clam Shells.

In passing almost every house near the sea-board I am reminded of that invaluable blessing that we enjoy, the *poor man's bank*, by a pile of clam shells kicking about the premises of the *clam bank* customers.

Now this is wrong; not only wrong, but it is false economy and a slovenish trick, to throw shells about to be a plague and nuisance during the summer, and afflict the children with sore feet. But do you ask what shall be done with the shells? I answer gather them up and burn them, and put the ashes with your wood ashes; which will increase their value more than one half, either for soap or to put on your corn.

There is much more substance in these shells than many are aware of. Many of our good matrons know very well the value of burnt shells in soap making, as they are frequently used as a substitute for *lime*. They will, when burnt, answer the same purpose when applied to corn. I consider a bushel of fine burnt shells mixed with four or six bushels of wood ashes to be worth a bushel of corn, or at least for every bushel of this kind of mixed ashes, put upon corn just as it is coming up, will increase the quantity of corn to the number of bushels of ashes put on. It forces the corn along when in a weak state, serves to drive away the worms, and is a fine stimulus to the tender plant.

How happy is the Farmers life!

How happy is the Farmers life!
For city noise, and city strife,
And fashions, in the city rife,
He has no wish or care.
His annual round the Farmer goes,
He ploughs and harrows, reaps and sows,
And plenty crowns him at the close,
Of each succeeding year.

He reads the weekly news with care!
The first of all, the corner where
These "useful hints to farmers" are,
Which his profession treat;
The more its value to enhance
Lends his experiments perchance,
And pays the printer in advance,
For this his fav'rite sheet.

His bank of earth no discount fears,
His stock increases with his years,
His double dividend appears
In his abundant crop.
The *Farmers' bank supports the state*,
While worthless rags, 'bout which men prate,
And promises which they create,
Prove but a broken prop.

The thrifty Farmer envies not
The Lawyer or the Tradesman's lot,
In mansion great, or humble cot,
His independent life
Rolls round, with each revolving year,
And all things in their course, appear,
Were I to choose my station here
I'd be a Farmers wife. Milk Maid

Song.

'Tis sweet to be a shepherd's boy,
And sweet the shepherd's labor;
Sweet lambkins' all his cares employ,
And sweet his pipe and tabor.
How sweet his frugal meal to eat
By sweetly shaded mountain!
Sweet fruits his fare, with water sweet
From sweetly flowing fountain.

'Tis sweet when evening spreads her shades
Through some sweet grove to wander;
And sweet, amidst it gentle glades,
On maiden sweet to ponder.
At night the sweet green grass his bed,
His lull-song sweet, the billow:
A moon-beam sweet to wrap his head,
A daisy sweet his pillow